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ABSTRACT

The present study examined the role of similarity of experience in young children's affective reactions to others. Some preschoolers played one of two games (Puzzle Board or Buckets) and were informed that they had either failed or succeeded; others merely observed the games being played and were given no evaluative feedback. Subsequently, each child was shown a videotape of another child failing on the Buckets game. Thus, each child observed the confederate as having a similar or dissimilar experience on a familiar or unfamiliar game. The observing child's facial reaction to the saddened confederate was unobtrusively videotaped while he/she watched the videotape presentation. Immediately following the presentation, each child was asked to indicate how he or she felt on a 7-point "smiley face" rating scale. Results were generally consistent with the notion that a young child's empathy with an unhappy agemate will be enhanced when the observing child has had a similar unpleasant experience. Implications of the present findings for prosocial behavior in children are discussed. (Author/RH)

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SIMILARITY OF EXPERIENCE AND EMPATHY IN PRESCHOOLERS

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SUMMARY

The present study examined the role of similarity of experience in young children's affective reactions to others. Some preschoolers played one of two games (Puzzle Board or Buckets) and were informed that they had either failed or succeeded; others merely observed the Puzzle Board or Buckets games being played and were given no evaluative feedback. Subsequently, each child was shown a videotape of another child failing on the Buckets game (thus, each child observed the confederate have a similar or dissimilar experience on a familiar or unfamiliar game). While watching the videotape presentation, the observing child's facial reaction to the saddened confederate was unobtrusively videotaped. Immediately following the presentation, each child was asked to indicate how he or she felt on a 7-point smiley-face rating scale. The results were generally consistent with the notion that a young child's empathy with an unhappy agemate will be enhanced when the observing child has had a similar unpleasant experience. The implications of the present findings for prosocial behavior in children are discussed.

SIMILARITY OF EXPERIENCE AND EMPATHY IN PRESCHOOLERS

A. INTRODUCTION

The capacity to empathize, or vicariously experience the emotional state of another individual, has frequently been suggested as playing an important role in the development and expression of prosocial behavior (1, 9, 13, 20). One factor which has been associated with heightened empathic responsiveness in children is the perception of similarity to the other. Children have been found to respond more empathically to others of the same than opposite sex [5 (females only), 11]. In addition, young girls have been reported to verbalize more empathy to slide characters of the same race than to those of a different race (17). Thus, it appears that children, like their adult counterparts (18, 23), respond more empathically to those who are perceived as similar to the self than to those who are not.

While prior studies involving children have focused on similarity in sex and race, little is known about their empathy with peers who have encountered similar or dissimilar experiences. Both the inductive socialization technique (6, 14) and prosocial behavior training projects (10, 16, 22), which have the common goals of increasing the child's awareness of and sensitivity to the feelings of others, encourage the child to "share" the experience (i.e., the perspective and emotional reaction) of the other. Similarly, experimental studies of the empathy-prosocial behavior relation (7, 15) have attempted to arouse empathy by instructing children to focus on and experience the feelings of needy others. However, in these prior investigations the child's prosocial behavior has been of primary concern and empathy has generally been assumed to be aroused rather than directly measured. Moreover, these studies only indirectly address the question of whether common experiences, like common physical characteristics, promote empathy in young children.

In the present study, some preschoolers played one of two games (Puzzle Board or Buckets) and were informed that they had either failed or succeeded; others merely observed the Puzzle Board or Buckets games being played and were given no evaluative feedback. Subsequently, each child was shown a videotape of another child failing on the Buckets game (thus, each child observed the confederate have a similar or dissimilar experience on a familiar or unfamiliar game). While watching the videotape presentation, the observing child's facial reaction to the saddened confederate was unobtrusively videotaped for later analysis. Immediately following the presentation, each child was asked to indicate how he or she felt on a 7-point smiley-face rating scale.[1] In general, it was expected that a preschooler's empathic responsiveness to an unhappy agemate would be enhanced when the observing child has had a similar unpleasant experience.

B. METHOD

1. Subjects and Experimenter

A total of 42 Caucasian children, 21 boys and 21 girls, enrolled in a university preschool program in a middle-class community in northeastern Kansas took part in the study. The children's ages ranged from 39 to 62 months with a mean of 52 months. All of the children had parental permission to participate. Seven children were randomly assigned to each of the six conditions described below. The experimenter was a female student in psychology. She had spent several hours in the regular preschool program prior to conducting the study so that she would be familiar to the children.

2. Experimental Setting and Procedure

The study was conducted in the preschool in a large room adjacent to an observation booth equipped with a one-way mirror. For the purpose of this study, the room was partitioned into three stations.

Station 1. The experimenter greeted each child and escorted him/her to a small table in the corner of the room. Each child was informed that he/she would soon be shown a new game and that, later in the session, he/she would watch another same-sex child play a game on television. In the Success and Failure conditions only, the experimenter displayed and explained the Superstar Board at this time. Children assigned to these groups were told that if they could successfully complete the game, their names would be printed on a special plate attached to a large (56 x 71cm) brightly-labeled Superstar Board and a large red star would be hung next to their names. The experimenter demonstrated how the Superstar Board would look if the child was able to succeed on the game. The children were then cautioned that if they did not succeed on the game, their names and the red star would be removed from the Superstar Board. When questioned at this time, all of the children in the Success and Failure conditions indicated that they wanted to become a Superstar. (It should be noted that the children in the No Outcome condition did not learn about the Superstar Board until they watched the videotape presentation at Station 3. It was feared that informing the children in this condition that others, unlike themselves, had the opportunity to become Superstars would, in and of itself, engender negative affect.)

All of the children were informed that prior to seeing the new game, the experimenter wanted to familiarize them with a smiley-face scale that they would be using at various times throughout the session to show how they feel. The experimenter displayed and gave the children practice using a 7-point smiley-face scale ranging from 1 (very happy) to 7 (very sad). Similar affect measures have been used in prior studies (3, 4). Following the demonstration of the smiley-face scale, the child played (or was simply shown how to play) one of two games as described below.

The children assigned to the Puzzle Game condition were initially shown a completed puzzle board with seven small wooden pieces of different sizes and shapes fitted into corresponding slots in a wooden puzzle base. The experimenter told the children that the object of the game was to select the correct pieces from a box and to place these pieces into their appropriate positions on the board before she said "stop". In the Puzzle Game-Success condition, the experimenter emptied the board into a box containing three extra wooden pieces which were very different in shape and size from the actual puzzle game pieces. Each of the children in this condition successfully completed the puzzle game in the two minutes alloted for the task and was congratulated on becoming a Superstar. In the Puzzle Game-Failure condition, the experimenter surreptitiously removed one of the actual puzzle game pieces after her demonstration and emptied the remaining board pieces into a box containing three extra pieces which were similar to, but not duplicates of, the piece that had been removed. The children in this condition were, of course, unable to successfully complete the puzzle. After the two minute time limit had elapsed, the experimenter informed each child that he/she was not a Superstar; the child's name plate and the red star were removed from the Superstar Board. In the Puzzle Game-No Outcome condition, the experimenter simply demonstrated for approximately two minutes how the game was played by selecting some of the game pieces from the box and replacing them into the puzzle board. The children's infrequent bids to assist in the demonstration (e.g., "Put that piece there") were acknowledged in a nonevaluative manner. Immediately after (1) succeeding on the game and becoming a Superstar or (2) failing on the game and not becoming a Superstar or (3) merely observing how the game was played, the children were asked to rate how they felt on the smiley-face scale.

The children assigned to the Buckets Game were initially shown a box of ping pong balls and three buckets having successively smaller openings. The experimenter told the children that the object of the game was to toss a ping pong ball into each bucket in order from a short distance away (approximately 1 m). The children were informed that participants would be given a maximum of three tosses at each of the three buckets. In the Buckets Game-Success condition, the circular opening to each bucket was large enough to enable all of the children to succeed on the game. Each child in this condition was subsequently congratulated on becoming a Superstar. In the Buckets Game-Failure condition, although the first two buckets were the same as those used in the Success condition (and all of the children were, again, able to make at least one of three tosses), the opening to the third bucket was only slightly wider than the diameter of the ball. None of the children in this condition was able to "make a basket" into the third bucket. The experimenter informed each child that he/she was not a Superstar; the red star and the child's name plate were removed from the Superstar Board. In the Buckets Game-No Outcome condition, the experimenter merely demonstrated how the game was played and the children's bids to play the game were simply acknowledged in a neutral manner. As in the Puzzle Game conditions, the children were asked to rate how they felt on the smiley-face scale immediately after (1) becoming a Superstar or (2) failing to become a Superstar or (3) merely observing how the Buckets Game was played. Upon completion of the affect rating, each child was led to another section of the room.

Station 2. The child's brief stop at Station 2 was intended to serve as a "cooling down" period wherein the negative (positive) affect presumably experienced after failing (succeeding) on the prior task would dissipate prior to watching the critical videotape at Station 3. Upon arriving at Station 2,

the experimenter encouraged each child to sit and play with the several toys available while she finished some paperwork in another section of the room. After a three minute delay, the experimenter returned to Station 2, administered the smiley-face rating scale once again, and escorted the child to Station 3.

Station 3. Each child was seated facing a 12-inch videotape monitor. Directly above the monitor was a one-way mirror which allowed for unobtrusive videotaping of the child's facial expression from an adjoining observation room.

Each child was told that he(she) was going to see another boy(girl) from another preschool playing a game. Each preschooler in the Puzzle Game (Buckets Game) condition was informed that the child on the television was going to be playing the same game as (a different game than) the one he/she had played earlier ("had been shown earlier" in the No Outcome condition). The children were told that the woman on the television was going to explain to the boy(girl) how to play the game and what he(she) must do to successfully complete the task. The experimenter encouraged the children to watch the television very closely.

All of the children were shown the same videotaped sequence, approximately four minutes in length. The setting for the videotape was similar to that used for Station 1. The 4-year-old Caucasian female confederate was dressed in a sex-neutral manner and was identified as "Chris" by the experimenter on the videotape. After some preliminary comments, the experimenter demonstrated the Puzzle Game to Chris and explained the rules for becoming a Superstar. When asked, the confederate indicated that she understood the rules for playing the game and wanted to become a Superstar. On the experimenter's signal, the confederate began working diligently but was shown to be unable to complete the Puzzle Game in the two minutes allotted. The

experimenter informed the confederate that she was not a Superstar; the red star and name plate were removed from the Superstar Board. Upon receiving the "bad news", the confederate displayed a very sad facial expression for approximately 15 seconds. During this period, the observing child's own facial expression to the saddened confederate was videotaped through the one-way mirror.

Immediately after turning off the videotape, the experimenter asked the child to rate how he/she felt on the smiley-face scale for the third and final time. Following this rating, the experimenter asked the child to answer three brief manipulation check questions (described in the next section). Although data collection was complete at this point, each child was escorted back to Station 1, succeeded on the Puzzle Game, and had his/her name displayed on the Superstar Board. Finally, the experimenter thanked the child and returned him/her to the regular preschool program.

C. RESULTS

The children's self-report affect ratings and the ratings of their facial expressions were analyzed in 2(Sex of Subject) x 2(Game: Puzzle vs. Buckets) x 3(Outcome: Failure, Success, No Outcome) analyses of variance. Post hoc analyses of significant effects were conducted with the Newman-Keuls test.

At Station 1, children who failed on a game reported feeling significantly sadder ($\bar{X}$ = 5.36) than did children who simply observed how the game was played ($\bar{X}$ = 2.64); children in the latter group, in turn, reported feeling significantly less happy than did children in the success group [$\bar{X}$ = 1.43, F (1, 30) = 23.80, p < .001 (main effect of Outcome)]. Thus, the manipulation of game outcome appears to have had the intended effect upon the children's affect.

No significant differences were found in the children's affect ratings after playing briefly at Station 2 [mean ratings for Failure, Success, and No Outcome groups were 1.57, 1.79, and 1.64, respectively, F (2,30) < 1]. The self ratings at Station 2 indicate that the filler task achieved the intended goal of equating the children's affective states prior to their viewing of the critical videotape presentation at Station 3.

As indicated earlier, each child's emotional reaction to the confederate's sadness upon failing at the Puzzle Game was tapped in two ways at Station 3. The analyses of the children's self-reported affect revealed a main effect of Game [F (1, 30) = 4.28, p < .05] and a significant interaction of Game and Outcome [F (2, 30) = 4.60, p < .025] (see Table 1).

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Insert Table 1 about here

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The latter effect appears to be primarily due to the heightened affect scores (reflecting increased sadness) of children in the Puzzle Game-Failure condition. Consistent with this interpretation is the finding that, of the six groups, only children in the Puzzle Game-Failure condition indicated that they felt significantly sadder after watching the confederate fail on the Puzzle Game at Station 3 than they did after playing with the toys at Station 2 [t (6) = 3.55, p < .025].

Videotapes of the children's responses to the confederate's saddened face were independently rated by two males in psychology on a 5-point scale ranging from 1 (very happy) to 5 (very sad). The raters were unaware of the children's condition assignments and achieved an acceptable level of interrater reliability [r (40)= .86]. Each child's facial expression score was computed as the average of the two raters' scores for that child.

A significant interaction of Game and Outcome was found on this measure, [F (2, 30) = 4.79, p < .025] (see Table 2). Children in the Puzzle

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Insert Table 2 about here

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Game-Failure condition were rated as significantly sadder than children in the Puzzle Game-Success and Puzzle Game-No Outcome conditions; in contrast, the facial expression ratings of the children in the Buckets Game condition were not found to be mediated by the children's prior outcome on the game.

Responses to the first two (multiple choice) manipulation check questions administered after the videotape presentation indicated that all of the children (1) understood that the boy (girl) on the TV was trying to become but (2) did not become a Superstar. The third manipulation check question required the children to rate on the 7-point smiley face scale how the boy (girl) on the TV felt after playing the game. While the children consistently rated the unsuccessful confederate as very sad (overall $\bar{X}$ = 6.12), an unexpected main effect of Outcome was found [F (2, 30) = 5.60, p < .01]. Children who earlier had failed on a game rated the confederate as significantly sadder ($\bar{X}$ = 6.71) than did children who earlier had either succeeded ($\bar{X}$ = 5.86) or received no outcome on a game ($\bar{X}$ = 5.79). Thus, the children who failed at Station 1 not only reported feeling significantly sadder at the time than did the children who received positive or no feedback, but, at Station 3, they also attributed greater sadness to the confederate who shared their fate.

D. DISCUSSION

The present study examined the role of similarity of experience in preschoolers' affective reactions to others. In general, the results were consistent with the notion that a young child's empathy with an unhappy agemate will be heightened when the observing child has had a similar

unpleasant experience. Although the findings for the facial expression measure were not as robust as those for the children's self reports, a consistent pattern of results did emerge from both indicants. In those conditions in which preschoolers had worked on the same (Puzzle) task as the unhappy confederate, having also previously experienced the same (failure) outcome as the confederate served to enhance their empathic responsiveness.

In this study only a few minutes separated each child's exposure to the unhappy agemate and the prior brief similar (or dissimilar) experience. In another recent investigation (2), first grade children identified as socially rejected on the basis of teacher and peer ratings reported being significantly sadder when shown slide stories of children saddened because of social rejection than when they were shown slide stories of children saddened due to personal misfortune unrelated to popularity. In contrast children identified as popular showed no difference in their self-reported affect to the two slide story types. These results thus support and extend the present findings by suggesting that a child's empathy with a particular peer may be heightened if the child has regularly had experiences that are similar to that peer.

Important questions remain concerning the role of similarity of experience in children's reactions to others. While this study dealt with the emotion of sadness, additional research is needed to explore the extent to which one's empathy with a happy, angry, or frightened peer is influenced by having personally experienced a similar reaction in a similar situation. A particularly important direction for future inquiry will be to investigate the effects of perceived similarity of experience, not only on the observing child's empathy, but on his or her behavior toward a sad or needy other. Although it might be expected that "similarity of experience promotes empathy which, in turn, promotes prosocial behavior," there are undoubtedly

numerous qualifiers to this generalization. For example, the results of a recent study involving adult child-care workers (12) suggest that similarity of background and experience may undermine the emergence of an empathic helping relationship if the workers feel powerless to help their youthful clients. Promoting helping behavior in young children also requires considerably more than merely encouraging them to appreciate their similarity to those who are less fortunate. Young children need to be given the encouragement, the opportunities, and the interpersonal skills necessary to translate their thoughts and feelings into appropriate prosocial behavior.

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FOOTNOTE

[1]Nonverbal measures of empathy were used in this investigation because they appear to avoid some of the difficulties encountered with verbal self-report procedures (see criticisms in 1, 8, 19, 21).

Table 1

Preschoolers' Mean Smiley Face Affect Ratings

After Watching Videotape

	Outcome		
Game	Failure	Success	No Outcome
Puzzle	4.86_a	2.86_b	2.57_b
Buckets	1.71_b	2.00_b	2.86_b

Note. Means that do not share a common subscript differ at $p < .05$ as determined by the Newman-Keuls test.

Table 2

Mean Ratings of Preschoolers' Facial Expressions While Watching Videotape

	Outcome		
Game	Failure	Success	No Outcome
Puzzle	3.86_{a}	2.93_{b}	2.71_{b}
Buckets	3.07_{ab}	3.36_{ab}	3.21_{ab}

Note. Means that do not share a common subscript differ at $p < .05$ as determined by the Newman-Keuls test.